

DOCKETED

IN THE UNITED STATES DISTRICT COURT FOR THE
SOUTHERN DISTRICT OF NEW YORK

MIDWAY MANUFACTURING COMPANY:	:	Deposition of
vs.	:	William L. Harrison
THE MAGNAVOX COMPANY	:	74 Civ 1657 CBM
and	:	74 C 1030
SANDERS ASSOCIATES, INC.	:	

IN THE UNITED STATES DISTRICT COURT FOR THE
NORTHERN DISTRICT OF ILLINOIS, EASTERN DIVISION

THE MAGNAVOX COMPANY, et al :	Consolidated Actions
vs.	74 C 1030
	74 C 2510
BALLY MANUFACTURING	75 C 3153
CORPORATION, et al	75 C 3933
-----	:

Continued deposition taken
pursuant to subpoena and notice at the Sanders Associates,
Inc.; Headquarters, Spit Brook Road; Nashua, New Hampshire;
Tuesday, March 16, 1976; commencing at three o'clock in
the afternoon.

ERNEST W. NOLIN & ASSOCIATES
General Stenographic Reporters
369 ELGIN AVE., MANCHESTER, N. H. 03104
TELEPHONE: 623-6906

ORIGINAL

PRESENT:

For Midway Manufacturing
Company, Bally Manufacturing
Corporation and Empire:

Donald L. Welsh, Esq., 135 South
 LaSalle Street, Chicago,
 Illinois.

For Sanders Associates, Inc.,
and Magnavox Company:

James T. Williams, Esq.,
 77 West Washington Street,
 Chicago, Illinois.

For Sanders Associates:

Louis Etlinger, Esq., and
 Richard I. Seligman, Esq.,
 Daniel Webster Highway, South,
 Nashua, New Hampshire.

Stenotype Reporter:

Ronald J. Hayward

WILLIAM L. HARRISON

called as a witness, being first duly sworn, was examined
 and testified as follows:

(Interrogatories by Mr. Welsh.)

Q. What is your full name, Mr. Harrison?

A. William L. Harrison.

Q. Where do you live?

A. 101 Broad Street, Hollis, New Hampshire.

Q. Are you employed?

A. Yes, sir.

Q. By whom? Department?

A. Sanders associates.

Q. And in what capacity are you employed by Sanders?

A. Associate engineer, electronic.

Q. How long have you held that position?

A. Approximately twelve years.

Q. Are you in a department at Sanders?

A. Yes, sir. I like to establish first and then go back.

Q. What department?

A. Receiver group. 1-2340 is the number of the department.

Q. Is that 1-2340?

A. 1-2340.

Q. It is called a group? In that position?

A. That is the department.

Q. Does that department have any other designation

A. Such as a name? A group.

A. There is a group which is the receiver group.

Q. So the department is a department in the receiver

A. group?

A. No, the receiver group is in the department 1-2340.

Q. To whom do you report?

A. At present?

Q. Yes.

A. In that department?

Q. Well, at present what I would like to do and the questions I will be asking are to just find out generally what positions you have held at Sanders or what duties you have had and the period of time that you have held the various positions, if there were more than one. So whatever you are doing now I would like to establish first and then go back.

A. I just switched over to learning reliability engineering. I am on loan to another group.

Q. And when did you undertake that job?

A. Last week have you belonged to the receiver group?

Q. Whom do you report to in that position?

A. Paul Berry. an, general recollection, a year, 1960

Q. Is he in the receiver group?

A. No, this is in a group in this building, another program, a different program. I am on loan.

Q. On loan from the receiver group?

A. Yes. electronic, for about twelve years?

Q. What did you do prior to a week ago when you changed?

A. I was working in the Ocean Systems Division.

21 Q. What was your position there?

A. My position was engineering on a Sonobuoy program.

22 Q. How long did you work in engineering on the Sonobuoy program?

A. I don't - I can only estimate.

23 Q. That is fine, just generally.

A. Three to four months.

24 Q. And was that a part of the receiver group?

A. No, this again was on loan to another division or department.

25 Q. Do I understand correctly you have been with the

A. receiver group for twelve years?

26 Q. No, that is the group I presently belong to.

26 Q. How long have you belonged to the receiver group?

A. I do not recall.

27 Q. Do you have any general recollection, a year, two years, five years?

A. Five, plus or minus two, I'd say. I moved around

28 Q. That's true for the entire period that you were

28 Q. But you have had the position of associate engineer, electronic, for about twelve years?

29 Q. Ten to twelve years, yes, sir.

29 Q. What did you do prior to going to work on the

Sonobuoy program? no but recall the date for

A. I worked on other military programs.

Q. For approximately what period of time?

A. I don't recall.

Q. Do you have any rough idea there?

A. I switched from job to job so frequently that it is difficult.

Q. Would it be accurate to say that while you have

been a member of the receiver group, that you have held many different specific engineering jobs here at Sanders? on many different programs during the

A. Quite a few. It is, engineering?

Q. I mean that is an accurate characterization of

what you have been doing or is there a better way to say it?

A. I have been on many different programs, but the type of work I do essentially is similar; namely, engineering as in May.

Q. That is true for the entire period that you have had the position of associate engineer?

A. I don't understand the question, sir.

Q. Well, you stated, at least as I understand it, with

the receiver group you have been on many different

programs, but doing basically the same thing, engineering. Now, was that also true prior to the time you became a member of the receiver group?

A. I believe so.

36 Q. I believe you stated you had the position of associate engineer, electronic, for ten to twelve years.

A. Yes, sir.

37 Q. My question was, Was that same thing true during that period of ten totwelve years, specifically you have been on many different programs doing the same work; that is, engineering?

A. Yes, sir.

38 Q. Could you be more specific as to what you mean by engineering?

A. Design, construct electronic equipment.

39 Q. How long have you been with Sanders?

A. Nineteen years in May.

40 Q. What did you do prior to the time when you became associate engineer of electronics?

A. Prior to that, sir?

41 Q. Yes.

A. I was a technician.

Q. And when you were a technician, did you do the same type of work?

A. Mainly I would have been troubleshooting, constructing bread board equipment, test data.

Q. Prior to coming to work for Sanders, what did you do?

A. I was in the United States Air Force.

Q. For how long?

A. Four years, sir.

Q. What did you do there?

A. I was a radar maintenance technician.

Q. What rank or rating did you achieve?

A. Staff sergeant.

Q. And did you attend any service schools?

A. Yes, sir.

Q. What schools?

A. Electronic Fundamentals and Heavy Ground Radar.

Q. And then I returned after being out at a home

base for what was called 7 Level School. It was

more radar courses.

Q. So you were in the service from roughly '53 to

A. '57 in May?

A. That is correct.

- 50 Q. What did you do prior to that time?
- A. I spent two years in New Bedford Vocational High School; that is in New Bedford, Massachusetts.
- 51 Q. Did you graduate?
- A. No, sir. That was after high school.
- 52 Q. You did not graduate from the New Bedford High School?
- A. No, sir.
- 53 Q. Have you ever received a high school diploma?
- 54 A. Yes, sir.
- 54 Q. When did you receive that?
- 55 A. 1951.
- 55 Q. From what high school?
- 56 A. Bourne High School in Bourne, Massachusetts.
- 56 Q. What course of study did you pursue at the New Bedford Vocational High School?
- A. Machinist trade.
- 57 Q. Did that include any electrical courses?
- 58 A. No, sir.
- 58 Q. Subsequent to leaving the Air Force, have you taken any technical courses?
- 59 A. Yes, sir. I took some math courses.
- Q. What were those? trigonometry, calculus I and II, and

A. I entered an associate's degree program at Lowell Technological Institute in Electronic Engineering. (The design courses or four was of that nature?)

MR. WELSH: May I have that

A. answer read back? (The answer was, but I don't recall what they were at this time.)

(Whereupon, the previous

Q. You are familiar with the design project of Sanders?

answer was read back by

the reporter.)

A. Yes.

Q. Did you pursue the program to completion?

A. Yes, sir. (The witness was looking for a capable technician to

Q. Did you receive a degree? (The witness was looking for a capable technician to

A. Yes, sir. (The witness was looking for a capable technician to

Q. What degree did you receive?

A. Associates Degree in Electronic Engineering.

Q. How long did that course take?

A. It was a four-year course that I completed in

Q. five. (The witness was looking for a capable technician to

Q. Was that a night school?

A. Yes, sir. (The witness was looking for a capable technician to

Q. And what courses did you pursue there specifically?

A. A course in DC theory, AC theory, math courses,

A. such as algebra, trigonometry, calculus I and II, as

I recall. I believe others that I do not recall at the moment.

66

Q. Any electronic design courses or courses of that nature?

A. I am sure there were, but I don't recall what they were at this time.

67

Q. You are familiar with the TV game project at Sanders?

A. Yes.

68

Q. How did you first become familiar with that project?

A. Ralph Baer was looking for a capable technician to work on this project with him. At the time I was finishing up on another program.

69

Q. What was the other program?

A. It was a Sonobuoy program.

70

Q. How long had you been on that program?

A. As I recall, two to three years.

71

Q. Was that when you were a technician or after you became an associate engineer?

A. I was a technician.

72

Q. When did you receive your degree from Lowell Technological Institute? involve any work by you

A. 1964 plus or minus a year, I would guess.

73 Q. In your work on the Sonobuoy project before you went to work on the TV game program, did your work consist of constructing the breadboard equipment, troubleshooting and taking test data, as you indicated?

A. Yes, sir.

74 Q. Do you recall when you went to work on the TV game project?

A. The time?

75 Q. Yes.

A. I don't recall; I think it was around 1967 plus or minus a year.

76 Q. Prior to your two to three years of working on the Sonobuoy program just prior to going to work on the TV game project, what programs did you work on?

A. Military programs is really all I can tell you.

77 Q. Did any of these involve a cathode ray tube?

A. As far as I was concerned?

78 Q. Yes.

A. No, sir.

79 Q. Did the Sonobuoy program involve any work by you with any equipment using a cathode ray tube?
[Intercom, a recess was taken.]

A. No, sir.

80 Q. Prior to the time you went to work on the TV game project, had you had anything to do with cathode ray tubes?

A. Anything?

81 Q. Yes.

A. As far as my work is concerned?

82 Q. Yes.

A. No, sir.

83 Q. Also prior to your starting on the TV game project, had you had anything to do with television receivers?

A. At work?

84 Q. At work or otherwise.

A. Well, only what I did as far as playing with television at home.

85 Q. And what did your playing with television consist of?

A. Repairing my own or maybe working on a neighbor's or something like that.

MR. WELSH: Let's take a break now.

(Whereupon, a recess

was taken.)

MR. WILLIAMS: Mr. Welsh, during the break Mr. Harrison mentioned that he may have made a mistake as to the time period for which he has been an associate engineer and he wanted to correct that.

MR. WELSH: Fine.

THE WITNESS: I do not recall the exact date, it is very hazy. It may have been in the late sixties.

86 Q. I believe that is consistent with what you said about working as a technician on the Sonobuoy project. What do you mean by that?

A. But I am still not a hundred percent sure. It meant more money, so that was the most important thing.

87 Q. Now, do I understand correctly that you had nothing to do with cathode ray tubes at least at Sanders prior to your going to work on the TV game project?

A. As best I recall, that is right.

88 Q. You did work with cathode ray tubes, however, did

Q. you not, in the Air Force in connection with your

A. radar? I forgot the exact date.

A. Yes, sir. control.

89

Q. Radar as you worked on it in the Air Force involved some type of scanning with the electron beam and CRT's, did it not?

A. Yes.

90

Q. What type of scanning was that?

A. Do you mean electrostatic or magnetic or what?

91

Q. Are you familiar with the raster scan or television sets?

A. Yes, I am.

92

Q. Was it similar to that?

MR. WILLIAMS: I object to the question; what do you mean by similar?

MR. WELSH: He may object to the question, if you understand it - - -

THE WITNESS: Yes, I understand it, I am thinking, that is all. Similar probably to just the horizontal part of the scan of the television receiver.

93

Q. Is it a spiral scan?

A. Yes, PPI type.

94

Q. What do you mean by PPI?

A. I have forgotten the exact identifications, something position control.

103

95 Q. Point position?

A. I don't recall, sir.

96 Q. In repairing your own TV set and perhaps working on those of neighbors, did you have any special equipment?

A. I had a multi meter and I have an inexpensive scope.

97 Q. By scope, do you mean oscilloscope?

A. Yes, sir.

98 Q. What is a multi meter?

A. It measures DC voltages, resistance measurements and current measurements and AC voltage measurements.

99 Q. Both types of current?

A. No, sir, I believe just DC current.

100 Q. When you went to work for Mr. Baer on the TV game project, was he the head of some department?

A. Yes, sir.

101 Q. What was that?

A. He was a division manager.

102 Q. And what division?

A. It is now called the Equipment Design Division; I don't recall what it was called at the time.

A. I believe it may have been the same.

103 Q. When you were working on the Sonobuoy program which

was completed just prior to your going to work on the TV game project, were you working in the Equipment Design Division or whatever its name was then?

A. It belonged to the Equipment Design Division.

104 Q. And was that where you carried on your work or were you on loan?

A. No, I was on loan, sir.

106 Q. So you physically were not working in that division?

A. That is correct.

106 Q. When you joined Mr. Baer, he was located at Canal Street?

A. Yes, sir.

107 Q. And was the Sonobuoy a program there or somewhere else?

A. Somewhere else, sir.

108 Q. So you physically changed locations?

A. Yes, sir.

109 Q. Had you been acquainted with Mr. Baer prior to the time you went to work on the TV game project?

A. Yes, sir.

110 Q. And how had you been acquainted with him?

A. I was in his division on other programs.

111 Q. Had you had much day-to-day contact with him?

A. Prior to?

112 Q. Prior to, yes.

A. At one previous time I had worked directly for him on a program.

113 Q. Prior to the Sonobuoy program?

A. Yes, sir.

114 Q. What program was that?

A. I do not recall.

115 Q. Was it just prior to the Sonobuoy program?

A. No, it was much earlier than that.

116 Q. So you were fairly well acquainted with him?

A. Yes, sir.

117 Q. In your work at Sanders prior to going to work on the TV game project, did you keep any sort of notebooks or logs with respect to the work you did?

A. Certainly, sir.

118 Q. What was your practice or custom, if you had one in that regard?

A. Usually it was just for data-taking.

119 Q. Do you do that in notebooks or on loose sheets

or what?

A. In notebooks, I believe. There could have been data taken on sheets if there were data sheets that went along with some specific program for some specific reason.

120 Q. Now, again prior to that time when you started to work on the TV game project, did you do any significant design?

A. Not as such.

121 Q. What do you mean not as such?

A. I would have been a technician working for an engineer and there could have been times when the circuit did not function properly that I may have come up with the right idea to fix it and make it work.

122 Q. Was it the custom that the engineer would design the circuit and then give it to you to construct and make a breadboard, is that how you worked?

A. That is correct.

123 Q. Is it also correct that you generally were not given the task of designing a circuit?

A. That is correct, in that same time span we are talking about?

124 Q. Yes, prior to working on the TV game project.

A. Yes.

125 Q. Your changing a circuit, I take it, probably fell in this category of troubleshooting, would that be correct?

A. Yes, sir, as I recall, that is correct.

126 Q. When you changed circuits, again prior to the time before you went to work on the TV game project and while you were working as a technician, did you record such changes of circuits?

A. I do not recall, but I would believe that I did.

127 Q. In your notebooks, probably?

A. Yes, sir.

128 Q. Did you keep your notebooks?

A. Personally?

129 Q. Was there any system for keeping a notebook?

A. No, each man kept his own notebook.

130 Q. And did you do that?

A. Yes, sir.

131 Q. Do you still have them?

A. No, sir, I don't believe so.

132 Q. Did you have any other practice or custom with respect to keeping records of the work that you

were doing prior to the TV game project?

A. As I recall on the Sonobuoy program, there was a notebook that several of us used for one specific part of a program. By that, I mean it went with the piece of equipment that we were working on.

133 Q. Did you make entries in that notebook apart from your own notebook?

A. As I recall I did.

134 Q. Did you make the same entries in both notebooks?

A. No, it would have been just in that one notebook, as I recall.

135 Q. Do you recall anything else about the custom or practice that you followed with respect to notebooks prior to going to work on the TV game project?

A. No, sir.

136 A.Q. Did you after you went to work on this TV game project continue to keep a notebook or some type of record of the work you were doing?

A. Yes, sir.

137 Q. And what did you do in that regard then after you went to work on the TV game program?

A. I acquired a notebook that we proceeded to keep

all the data on the TV games in.

MR. WELSH: May I have that answer read back, please?

(Whereupon, the previous answer was read back by the reporter.)

138 Q. Did you also keep notes apart from that notebook?

A. In the beginning?

139 Q. Yes, or at any time.

A. Not that I recall, but I suppose I could have, had the notebook not been there for some reason which I do not recall.

140 Q. That had not been your practice generally prior to that time, had it, to keep notes in addition to the notes that you kept in a notebook?

A. Not that I recall.

141 Q. In the keeping of notes, did you have any practice with respect to dates?

A. As I logged in data on a particular page, I would usually put that day's date, as I recall.

142 Q. That was part of your procedure in making an entry, to put down the date of the entry?

A. As I recall.

143 Q. Did you follow that practice fairly carefully?

A. As I recall I did.

144 Q. Did Sanders have more than one type of notebook?

A. Yes, sir.

145 Q. And this is speaking of the time when you started on the TV game project?

A. Yes, sir.

146 Q. What types of notebooks did they have at that time?

A. The typical brown and ECM blue. That is the typical notebook that I refer to. (Indicating) you

147 Q. This has been marked previously as Exhibit 25 during the deposition of Mr. Baer, I wonder if you would look at it and tell us if you recognize it?

A. Yes, I do.

148 Q. Is that a notebook which was kept by you?

149 A. Yes, sir.

150 Q. Is that the notebook that you stated you acquired when you went to work on the TV game project?

A. No, sir.

150 Q. Does that notebook contain entries in chronological order one. Exhibit 25, is it not?

order?

A. Yes, sir, I believe it does.

151 Q. I beg your pardon?

A. As I recall, it does.

152 Q. What periods of time are covered by those entries
or what is the period of time?

A. From memory or should I look?

153 Q. No, you may examine the book.

A. 12-27-67 through 12-18-68.

154 Q. Now you also referred to a blue hard cover notebook,
this has been marked as Exhibit 16, and I ask if
you would examine that and tell us if you recognize
that notebook?

A. Yes, I do.

155 Q. What do you recognize that notebook to be?

A. That is the first notebook that I acquired when
I went to work on the TV game project.

156 Q. Does that also contain chronological entries?

A. Yes, sir, as best I recall.

157 Q. What period of time do those entries cover?

A. 5-4-67 through 10-5-67.

158 Q. That notebook, Exhibit 16, is different from the
other one, Exhibit 25, is it not?

A. Physically?

159 Q. Yes.

A. Yes, sir.

160 Q. Is there any different procedure, or was there at that time, followed with respect to issuance of these notebooks or was the same procedure followed for the issuance of both of them?

A. I do not recall.

161 Q. Had you ever had a blue hard-covered notebook like Exhibit 16 before going to work on the TV game project?

A. No, sir, not that I recall.

162 Q. Had you had the other type of notebook similar to Exhibit 25?

A. Yes, sir.

163 Q. Is there any particular reason that you know of why you obtained the hard cover notebook of Exhibit 16 rather than the other type, Exhibit 25?

A. I was requested to do so.

164 Q. Who requested you to do that?

A. Mr. Baer. I recall.

165 Q. Did he say why?

17 A. I don't recall.

166 Q. But he specifically suggested that you acquire a
hard cover notebook?

A. Yes, sir.

167 Q. When did he make that request of you?

A. On or about the time I began on this program.

168 Q. Within a day or two of then?

A. I believe so, as I recall.

169 Q. How did you obtain the hard-covered notebook?

A. As best I recall, I would have either gone to the
Patent Office or what was considered the legal
office to obtain this notebook.

170 Q. Is that where you would have gone to obtain the
other type of notebook like Exhibit 25?

A. As I recall.

171 Q.. There was no supply room for supplies generally
where these were kept?

A. Not that I recall.

172 Q. Is there any procedure followed with respect to
notebooks as to signing them out or having them
numbered?

A. Yes. As I recall, I had to sign a card or something
that I had taken possession of that notebook.

173 Q. Did you do the same thing with respect to Exhibit 25?

A. Yes, sir.

174 Q. And you believe that was in the Patent Department?

A. As I recall, yes, sir.

175 Q. Do you know how numbers are assigned to notebooks?

A. No, sir.

176 Q. Turning to the inside cover of Exhibit 16, the hard-cover book, what is the number assigned on that notebook?

A. 373.

177 Q. And does that have some letters in front of it?

A. ECM.

178 Q. What does that mean, ECM?

A. I believe it means Electronic Countermeasures.

179 Q. Did that have that number on it when you were assigned the book?

A. As best I recall.

180 Q. Did it have that rectangle in red ink?

A. Right here? (Indicating)

181 Q. Yes.

A. I don't recall.

182 Q. Do you see the word "error" in red ink above the rectangle?

A. Yes, sir.

183 Q. Did you put that there?

A. No, sir.

184 Q. Was that put there in your presence?

A. Not that I recall.

185 Q. Was there another name written above where your name appears?

A. It appears that there was.

186 Q. Do you recall whether there was?

A. No, sir, I don't.

187 Q. Is that your signature?

A. Yes, sir, I believe it is.

188 Q. Did Mr. Baer give you any instructions with respect to making entries in Exhibit 16?

A. This is Exhibit 16 here? a signature there.
(Indicating)

189 Q. Yes. He did at the time of the trial?

A. May I look at the book?

190 Q. Surely. See him to the

A. He did give me, as I recall, they were loose papers that he had written down some ideas on and I believe he asked me to copy them in this notebook.

191 Q. Did he ask you to do that as the first thing?

A. As I recall, yes on page 211.

did you make those entries?

A. Yes, sir, I did.

Q. Did you do that of your own volition or at Mr. Baer's request?

A. At Mr. Baer's request, I believe.

Q. Did you place the dates on these entries on pages 1 through 8?

A. I did not, sir.

Q. Do you recognize the signature at the bottom of each of those pages?

A. Yes, sir.

Q. Whose signature is that?

A. Mr. Baer's.

Q. Did you see him place his signature there?

A. I do not recall.

Q. Did he place the date on them?

A. Yes, sir.

Q. Did you see him do that?

A. No, sir, I do not recall.

Q. Now, the date of the first entry by you I believe you said was May 4, 1967?

A. Yes, sir.

Q. And that appears on page 21? , 2 and 3,

192 Q. And did you do that?

A. Yes, sir.

193 Q. Is that your handwriting that appears on pages 1, 2, 3 and 4?

A. Yes, sir, it is.

194 Q. I hand you what have been marked as Exhibits 9-2 through 9-10 and ask you if you recognize those?

A. Yes, sir.

195 Q. What do you recognize those to be?

A. What I had copied in the first few pages of this notebook.

196 Q. Did Mr. Baer say why he wanted you to copy that material in the notebook?

A. I do not recall.

197 Q. Did he give you any other instructions with respect to the use of this notebook and the material that was to go into it? He entries on page 1 and 2.

A. As I recall, we were to keep our daily advances logged in this notebook.

198 Q. Did he ask you to copy anything else in the first part of the notebook?

A. Not that I recall.

199 Q. I refer you to the entries on pages 5, 6, 7 and 8,

A. That is correct, sir.

Q. Why did you commence your entries on page 21?

A. As I recall, I ^{had} ~~hadn't~~ been instructed to start work and Mr. Baer was not present when I started to make an entry and I did not know if he had more entries to make, so I left spaces - pages.

Q. So, before your first entry on May 4, you had copied the material on pages 1 through 8, is that correct?

A. I believe it would be.

Q. And then you started on page 21 to leave space for more entries in case Mr. Baer might desire to have them put in there?

A. That is correct.

Q. Did you place the lines diagonally on the pages from ten through twenty?

A. Not that I recall, sir.

Q. Do you recognize the entries on page 9 as being in Mr. Baer's handwriting?

A. Yes, sir.

Q. Do you know when he made those entries there?

A. No, sir, I do not.

Q. At the time you started to work on the TV game project, did Mr. Baer tell you what he had done

up to that point?

A. I am sure he had.

216 Q. You were at least aware of what had been done that
you had copied into the notebook from notes that
he had made previously, is that correct?

A. What I meant was that I believe he would have summed
up more or less what he had had when he was talking
to me about working on this program.

217 Q. Do you recall the status of the TV game project
at that time?

A. As I recall, it had barely begun.

218 Q. Was there any hardware in existence as of that time,
that you know of?

A. As I recall, there was.

219 Q. What hardware was that?

A. There was some small breadboard of tube circuits.

220 Q. Did he give you any demonstration?

A. I don't recall.

221 Q. Do you recall what the tube circuits intended to
accomplish?

A. I don't recall at this time.

222 Q. Do you recall whether at the time you started on
the TV game project, the project had developed

far enough that it was possible to generate symbols or spots on the screen of a TV set?

A. I do not recall, sir.

223 Q. I hand you Exhibits 9-38 through 9-42 and ask if you recognize those?

A. My recollection is very vague. I think that I probably did see these at some time, but I don't recall them very clearly.

224 Q. You don't recall them as the source for the material that you copied on pages 5, 6, 7 and 8 of Exhibit 16?

A. I guess they are.

225 Q. You don't recognize them?

A. Yes, they are the same as far as I can see.

226 Q. Now, do I understand correctly that you had nothing to do with the TV game project prior to the time that you went to work with Mr. Baer, is that correct?

A. That is correct.

227 Q. I think perhaps this was an error in the dating because this is Exhibit 9-43 apparently bearing a date of 2-19-67 and is that your signature?

A. Yes, sir, it is.

228

Q. You weren't working on the TV game project in February of '67?

A. As best I recall, I was not.

229

Q. Was there any rifle or control circuitry involving a rifle used in the initial hardware that you saw when you went to work on the project?

A. Not that I recall.

230

Q. So that date surely is wrong, is it not?

A. I believe it is.

231

Q. When you first went to work on the TV game project, did you attempt to set up any procedure as to how you would work with Mr. Baer or did he suggest some procedure?

A. I am not sure I know what you mean by how I would work.

232

Q. Well, what you would do from day to day.

A. I would have done whatever he instructed me to do from day to day.

233

Q. Do you recall any assignments other than the notebook which you were given when you first started to work on the TV game project?

A. I don't understand the question.

234

Q. Well, you said you would do what he requested that

you do, do you recall what he requested you to do when you first started to work on the project?

A. I do not recall.

Q. I hand you now a folder of papers which has been marked as Exhibit 23. The papers inside have been numbered consecutively 23-1, 23-2 and so forth; and I ask you to examine this folder and tell me if you recognize the papers in it?

A. Yes.

Q. What do you recognize them to be?

A. Data that I took on TV games, or notes.

Q. You recognize those as being in your handwriting or your sketches?

A. Yes, sir.

Q. Do you have any - did you maintain these papers in a file?

A. I don't recall.

Q. Do you recall the last time you saw the papers?

A. I do not recall.

Q. Do you recall the last time you saw the notebook, Exhibit 16?

A. As I recall, it would have been about the time that this lawsuit started.

241 Q. Do you recall when that was?

A. No, sir, I don't.

242 Q. Do you know whether the suit had started by that time?

A. I don't recall.

243 Q. Under what circumstances did you last see the notebook, Exhibit 16?

A. As I recall, Mr. Baer picked it up.

244 Q. Did he also pick up the papers constituting Exhibit 23 at the same time?

A. I do not recall if it was at the same time.

245 Q. Did he pick them up at some other time?

A. I do not recall the time, sir.

246 Q. Did he pick them up from you?

A. I don't recall; however, I am sure it would have been him.

247 Q. Did you follow the practice of dating these notes constituting Exhibit 23 as of the dates when you prepared the notes?

A. Yes, I believe I did.

248 Q. You have no reason to doubt that you did?

A. No, not that I can recall.

249 Q. Would these notes and the entries in the log book,

Exhibit 16, reflect what you actually did so far as the TV game project is concerned?

A. I believe they would.

250 Q. And would that not be what Mr. Baer asked you to do?

A. The work that these papers show?

251 Q. Yes, sir. Did you ever do anything on any specific part of the development of the TV game project that he did not instruct you to do?

MR. WILLIAMS: Well, I object to the question, the term whether he was instructed to do something has a great variety of meaning. Whether he was instructed to build a particular circuit or he was instructed to work on the project in general.

252 Q. What you did was in accordance with instructions from Mr. Baer, was it not? Now been done, if anything.

A. Usually that is true.

253 Q. Were there any circumstances when it was not true?

A. I don't recall, we worked very closely on this project.

254 Q. Were instructions given by him of varying scope; that is, some specific and others general?

A. I think most would have been specific.

255 Q. Do you have any particular reason for feeling
that way?

A. I am sorry, sir?

256 Q. Do you have any particular reason for that belief?

A. As I recall, I saw him at least once or twice
almost every day.

257 Q. Would you be able by looking at these notes
constituting Exhibit 23, as well as the entries in
Exhibit 16 to tell us what work you did with respect
to the TV game development?

A. I believe I could.

258 Q. Could you now refer to both of these and do that
for us? That is, what you worked on when you
first started. If possible, to tell us what stage
the development of the project had reached. In
other words, what had already been done, if anything,
by Mr. Baer.

MR. WILLIAMS: I object to the
question as calling for a narrative answer.

Apparently you are asking the witness to go through
all the documents of Exhibit 23 and pages of
Exhibit 16 and merely recount what he did during

the entire time period encompassed by those documents.

MR. WELSH: That is exactly right.

MR. WILLIAMS: And I don't think that is the proper procedure to follow.

MR. WELSH: I have asked him if he recalls what his first assignments were and he did not, other than to make the entries in the notebook. He did not recall what the status of the project was other than he knew that there was some hardware. These are his notes and he has said that they would reflect what he did and that is -- I am just asking him what he did when he first started and what he did next and what he did after that.

MR. WILLIAMS: But what you have asked him to do, as I understand it, is to go through those documents and state on the record what is represented by each of those documents and the work that he did as shown in those documents and that is not merely referring to the documents to refresh his recollection as to particular questions.

Now, if you want to ask him specific questions such as the ones that you referred to to which he replied he did not recall, and then ask him to see if those documents refresh his memory, that is perfectly proper procedure. But to just ask him to take a tour through the documents I think is highly improper. It calls for a narrative answer. It does not permit objections to be raised on the record.

MR. WELSH: I don't agree with you, but in order to keep this moving along, I think it will take longer, but we will start with what did you do first when you started to work on the TV game project. If you don't recall, please refer to the notes which I understood you made at that time in order to refresh your recollection.

THE WITNESS: As I recall, Mr. Baer gave me a book on color television and asked me to study it to learn what I could about color TV of which the data on 5-2-67 I apparently took notes of what I was studying about color TV.

Q. And those notes are represented or are the pages

marked 23-1 and 23-2?

A. Yes, sir.

Q. Any others such as 23-3?

A. I don't recall what that page was for or what I had in mind at the time. That is my writing.

Q. After you studied the book on color TV and made your notes represented by those or which constitute those exhibits, what did you do next?

A. I apparently reviewed or studied the initial breadboard that Mr. Baer had worked on or someone had worked on prior to my coming onto the program.

Q. What did you do with that?

A. What did I do with it?

Q. You said you studied the breadboard.

A. Apparently I studied this breadboard to see what they had already accomplished.

Q. When you say this breadboard - - -

A. That the attached schematic refers to. That apparently is the breadboard that had tubes in

Q. it.

Q. That was Exhibit - the schematic is the Exhibit 23-6?

A.A. That is correct, sir.

Q.Q. And does that bear your signature and a date?

A. Yes, sir.

267 Q. What is the date?

A. 5-3-67.

268 Q. Would you recognize that breadboard if you were to see it?

A. I don't know, sir.

269 Q. I hand you what has been marked as Exhibit 24 and ask if you recognize that?

A. My recollection is vague, but it does look somewhat familiar.

270 Q. And familiar as what, the breadboard that was existing when you joined the project of which you drew a schematic diagram on Exhibit 23-6?

A. That is correct, sir.

271 Q. Exhibit 23-5 states, "The attached schematic consists of a DMV with its output or variable differential signal used to produce a variable position vertical bar on CRT." Did you actually do that?

272 A. Did I actually - I don't understand the question.

273 Q. Use the circuitry to produce a variable position vertical bar on a CRT.

276 A. I do not recall.

273 Q. After you drew this, can you tell from these notes

or can you refresh your recollection by referring to these notes as to whether that was what you did with the breadboard?

279
A. I would believe from the notes I made on the schematic that I probably ^{hooked} ~~looked~~ this up and did operate it.

274
Q. And what did you do after that in connection with the TV game project?

281
A. I designed a simple plus and minus 9-volt power source and a vertical sync. signal off the 60-cycle line voltage.

282
Q. Did you use any reference material to design these parts?

283
A. I am not sure what you mean by reference material.

276
Q. Any handbooks or anything that described power sources using transistors?

284
A. I do not recall.

277
Q. Had you worked with similar circuitry prior to that time?

A. Similar circuitry, I am not sure I understand what you mean.

285
278
Q. Well, you have sketched out a diagram of a power source at least on Exhibit 16, page 21?

A. Yes.

279 Q. Had you constructed such a power source previously
or might you have referred to a handbook?

A. I had worked on power sources previously.

280 Q. And how about the free-running horizontal oscillator
shown in the lower portion of page 21 of Exhibit 16?

282 A. I do not recall if I had worked on a circuit similar
to that prior to doing this particular circuit.

281 Q. Did you have handbooks available at your work bench?

A. I do not recall.

282 Q. Did you actually construct the circuitry on
Exhibit 23-7?

A. As I recall, I did.

283 Q. That is consistent with the statement at the
282 bottom of page 23-7, is it not?

A. Yes, it is, sir.

284 Q. What did you do next with respect to the TV game
283 project after you built the circuitry on Exhibit 23-7?

A. I apparently designed a 60-cycle gated delay
multivibrator.

285 Q. For what purpose did you design that?

A. Would you read the question, please?

A. (Whereupon, the previous

question was read back
by the reporter.)

THE WITNESS: To produce a

horizontal bar on a cathode ray screen, I believe.

Q. Is that similar to what had been done with the
breadboard using vacuum tubes, I believe Exhibit 24?

A. I think it was meant to be very similar.

Q. And what did you do next?

A. I proceeded to build a better vertical sync.
circuit.

Q. Was that also with a view to producing the similar
effect of a bar on the screen of the CRT?

A. I believe it was to produce a variable black versus
white area on the screen, not just a bar as such.

Q. A division along a horizontal line between black
on one side of it and white on the other?

A. Top and bottom. White to black or black to white.

Q. What did you do next?

A. The circuitry was assembled and made to operate to

produce this variable split field.

Q. Is the circuitry shown in the block diagram on

page 24 of Exhibit 16?

A. Yes, sir, I believe it is.

292 Q. Now, that shows a Heath IG-62 generator, does
it not?

47 - A. Yes.

293 Q. What was the function of that generator in that
system?

A. To take the video from these test circuits that I
was building and use the Heath IG-62 as a modulating
device of an RF carrier to transmit the signal to a
television set.

294 Q. Did you have a television set which you were using
at that time?

A. Yes, sir.

295 Q. What television set was it?

A. It was an RCA colored television set Model GH560W.

296 Q. Did you obtain that model number from one of the
pages of the exhibits?

A. Yes, sir, I did.

297 Q. What page?

A. 25.

298 Q. Of Exhibit 16?

A. Yes, sir.

299 Q. I believe just a short while ago you were referring
to producing variable black-and-white sections,

DAY

47 - Line 6 - "due to low frequency response". I meant to say
"due to poor low frequency response" if I did not
in fact say so originally.

4/18/76 W.L.H.

was that what you were obtaining on this color television set?

A. No, sir.

Q. What did you obtain?

A. Apparently we obtained a horizontal bar which was due to low frequency response of the circuitry in the Heath IG-62 generator and/or the TV set.

Q. And this was not what you were seeking, is that correct?

A. That is correct.

MR. WELSH: I guess it is five o'clock, let's break for the day.

(Whereupon, the deposition in the above-entitled matter was adjourned at 5 p.m.)

William L. Housen
Deponent

THE STATE OF NEW HAMPSHIRE)

COUNTY OF Hillsborough) SS.

Subscribed and sworn to before me this 13th day of May 19 76.

Marilyn E. Trapalis
Justice of the Peace and/or
Notary Public

Marilyn E. Trapalis
Notary Public

My Comm'n. Expires March 19, 1980

THE STATE OF NEW HAMPSHIRE)
COUNTY OF ROCKINGHAM) SS.
)

I, Ronald J. Hayward, a Notary Public within and for the State of New Hampshire, duly commissioned, qualified and authorized to administer oaths and to take and certify depositions, do hereby certify that heretofore, to wit, on the sixteenth day of March, 1976, personally appeared before me at the Sanders Associates, Inc., Headquarters, Spit Brook Road, Nashua, New Hampshire, William L. Harrison, a witness called by and on behalf of Bally Manufacturing Corporation, et al, in the above-entitled action now pending in the United States District Court for the Southern District of New York and the Northern District of Illinois, Eastern Division; that the said witness was duly sworn to testify to the truth, the whole truth and nothing but the truth; that thereupon and while said witness was under oath, that said deposition was taken down by me in machine shorthand at the time and place herein stated and was thereafter reduced to typewriting.

I further certify that I am not interested in the outcome of said action.

IN WITNESS WHEREOF, I have
hereupon subscribed my hand and affixed my seal
of office, this 16th day of March, 1976.

Ronald J. Hayward
Ronald J. Hayward
Notary Public

My commission expires October 28, 1980.